

AMENDMENT NO. 1 JUNE 2019
TO
IS 16648 (PART 5) : 2017 CONCENTRATED SOLAR THERMAL —
SPECIFICATION

PART 5 TEST METHODS

(Page 2, clause 3.19, symbols A_1, A_2) — Substitute the following for the existing:

- ‘ a_1 — Temperature dependence first degree heat loss coefficient $\text{W/m}^2\text{K}$
 a_2 — Temperature dependence second degree heat loss coefficient $\text{W/m}^2\text{K}^2$,

(Page 5, clause 12.3, equations) — Substitute:

$$\eta = \eta_o \times \cos \Theta \times K_{\theta_T} \times K_{\theta_L} - a_1 \left(\frac{T_m - T_a}{I_{bn}} \right) - a_2 \times I_{bn} \left(\frac{T_m - T_a}{I_{bn}} \right)^2$$

or

$$\eta = \eta_o \times \cos \Theta \times K_{\theta_T} \times K_{\theta_L} - a_1 \left(\frac{T_m - T_a}{I_{bn}} \right) - a_2 \times \frac{(T_m - T_a)^4}{I_{bn}}$$

for

$$\eta = \eta_o - a_1 \left(\frac{T_m - T_a}{I_{bn}} \right) - a_2 \times I_{bn} \left(\frac{T_m - T_a}{I_{bn}} \right)^2$$

or

$$\eta = \eta_o - a_1 \left(\frac{T_m - T_a}{I_{bn}} \right) - a_2 \times \frac{(T_m - T_a)^4}{I_{bn}}$$

(Page 6, clause 17.2, third sentence) — Substitute the following for the existing:

‘Due to single axis tracking, the value of K_{θ_L} equals to unity.’

(Page 6, clause 17.2, equation) — Substitute:

$$\frac{Q}{A_p} = I_{bn} \times \eta_o \times \cos \Theta \times (1 - \text{End loss}) \times K_{\theta_L} - a_1 \times (T_m - T_a) - a_2 \times (T_m - T_a)^2,$$

for

$$\frac{Q}{A_p} = I_{bn} \times \eta_o \times (1 - \text{End loss}) \times K_{\theta_L} - a_1 \times (T_m - T_a) - a_2 \times (T_m - T_a)^2,$$